

<<< Choice Changed From >>> --Quarterly

- Do valves stick open or closed? (EQ303)

Data Source:

WAM R108 Valve Inspection List and SME Alonzo Foster

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- Are these valve(s) malfunctioning due to failing seals, gaskets, o-rings, packing, etc.? (EQ304)

Data Source:

Answered by SME Alonzo Foster, Supervisory Engineer Gas Operations

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- What is the likelihood that a failure of this equipment will result in a Grade 1 leak? (EQ310)

Data Source:

Answered by SME Alonzo Foster, Supervisory Engineer Gas Operations

Your Choice (weight: 1) --High

<<< Choice Changed From >>> --Low

- **Specific Valves Experiencing Failure (EQ-FailV-1a) (Kerotest Valve - Kerotest Valve (Kerotest, Prior to Mid 1980's))**

- What is the likelihood of this valve failing? (EQ309)

Data Source:

WAM 104/109 Leak Repair Database

Your Choice (weight: 2) --Medium

<<< Choice Changed From >>> --Low

Incorrect Operations Threat

- **Incorrect Operations (IOP) (PEOPLES GAS - Entire System)**

- Have any employees or contractors had operator qualification credentials revoked due to poor performance of any covered task? (IOP105)

Data Source:

Tech Training Disqualification Sheet

Your Choice (weight: 1) --Yes

<<< Choice Changed From >>> --No

◦ Provide Additional Information (IOPSet2)

Your Choice (weight: 0) --

▪ **Drugs and Alcohol (IOP-Drug) (PEOPLES GAS - Entire System)**

- Is the number of positive drug or alcohol tests/employee increasing? (IOP-Proc101)

Data Source:

First Advantage Database via HR contact Sandra Hallock.

Your Choice (weight: 0) --

Table 11.103. End of Year

	Positive Drug or Alcohol Tests	Total Employees	Tests/Empl
In 2005	3	883	0.003
In 2006	2	858	0.002
In 2007	3	883	0.003
In 2008	0	602	0.000
In 2009	2	605	0.003
In 2010	5	612	0.008
In 2011	4	628	0.006
In 2012	4	789	0.005
In 2013	4	812	0.005
In 2014	5	829	0.006

<<< Choice Changed From >>> --

Table 11.104. End of Year

	Positive Drug or Alcohol Tests	Total Employees	Tests/Empl
In 2005	0	0	0.000
In 2006	0	0	0.000
In 2007	0	0	0.000
In 2008	5	1100	0.005
In 2009	6	1105	0.005
In 2010	7	1109	0.006
In 2011	0	0	0.000
In 2012	0	0	0.000
In 2013	0	0	0.000
In 2014	0	0	0.000

- Enter explanation (IOP-Proc102iexp)

Data Source:

First Advantage Database via HR contact Sandra Hallock.

Your Choice (weight: 0) --There is no data providing any correlation between the increased number of positive test results and any specific failures or leaks.

<<< Choice Changed From >>> --There is no data on how many, if any, of these positives lead to any leaks or

■ **Failure To Follow Procedures (IOP-Follow) (PEOPLES GAS - Entire System)**

- Is the number of failures due to a failure to follow procedures increasing? (IOP-Proc101)

Data Source:

WAM Leak Database

Your Choice (weight: 0) --

Table 11.105. End
of Year

	Failures
In 2005	0
In 2006	0
In 2007	0
In 2008	0
In 2009	0
In 2010	2
In 2011	7
In 2012	4
In 2013	11
In 2014	6

<<< Choice Changed From >>> --

Table 11.106. End
of Year

	Failures
In 2005	0
In 2006	1
In 2007	0
In 2008	0
In 2009	0
In 2010	2
In 2011	0
In 2012	0
In 2013	0
In 2014	0

■ **Inadequate Procedures (IOP-Proc) (PEOPLES GAS - Entire System)**

- Is the number of failures due to inadequate procedures increasing? (IOP-Proc101)

Data Source:

Per Tech Training. O&M Plan Exhibit I, Distribution Manual General Order 3.000 Procedure for Pressure Testing Mains, By-Pass Piping, and Service Pipes. Also, O&M Plan Exhibit II Field Service Manual, Section 15 Working on Gas Piping Inside Premises (Bond Wire).

Your Choice (weight: 0) --

Table 11.107. End
of Year

	Failures
In 2005	0
In 2006	0
In 2007	0
In 2008	0
In 2009	0
In 2010	2
In 2011	0
In 2012	0

In 2013	2
In 2014	0

<<< Choice Changed From >>> --

Table 11.108. End of Year

	Failures
In 2005	0
In 2006	0
In 2007	0
In 2008	0
In 2009	0
In 2010	2
In 2011	0
In 2012	0
In 2013	0
In 2014	0

Material, Weld or Joint Failure Threat

- **Material, Weld or Joint Failure (MW) (PEOPLES GAS - Entire System)**

- What material is defective? (MW-SegMfg)

Data Source:

SME William Good, Supervisory Engineer, PGL Compliance Group

Your Choice (weight: 0) --

Table 11.109. Geographic Area or Project Name

	Pipe or Component Item	Size	Wall Thickness or SDR	Grade	Manufacturing Process	Coating	Date Manufactured	Date Installed	Contractor / Crews	Supplier
Service Pipe	Clear Plastic									
Fittings	Mechanical Joint									

<<< Choice Changed From >>> --

Table 11.110. Geographic Area or Project Name

	Pipe or Component Item	Size	Wall Thickness or SDR	Grade	Manufacturing Process	Coating	Date Manufactured	Date Installed	Contractor / Crews	Supplier
Main Pipe	Main									
Main Pipe Around Regulator Station	Regulator Station									
Service Pipe Downtown	Downtown Business District									
Service Pipe	Service									
HP CP Steel	Main or Service									
Main Pipe Downtown	Downtown Business District									
Other	Age of Piping									

- Provide Additional Information (MWSet3)

Your Choice (weight: 0) --

■ **Known Materials (MW-Matl) (Known Material - Compression Couplings for PE Pipe)**

- How often do failures occur in this section? (MW301)

Data Source:

SME William Good, Supervisory Engineer, PGL Compliance Group Material Failure Database LKMS Database (2006-2009) WAM R104/109 Leak Reports

Your Choice (weight: 3) --More than once per year

<<< Choice Changed From >>> --Once or more within 5 year period

- Are failures in this section/component increasing or decreasing? (MW302)

Data Source:

Material Failure Reports - PHMSA For years 2005 through 2009, Legacy leak data does not provide sufficient enough information to discern if a leak was on a plastic compression fitting. Therefore, a value of (7) was entered, which was the average number of leaks for years 2010 through 2014, in which reliable data was available.

Your Choice (weight: 0) --

Table 11.111. End
of Year

	Failures
In 2005	7
In 2006	7
In 2007	7
In 2008	7
In 2009	7
In 2010	2
In 2011	2
In 2012	19
In 2013	9
In 2014	4

<<< Choice Changed From >>> --

Table 11.112. End
of Year

	Failures
In 2005	0
In 2006	0
In 2007	0
In 2008	1
In 2009	1
In 2010	0
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- What would be the impact on the utility and its customers if this section were to fail? (MWCSQ4)

Data Source:

WAM R104/109 Leak Reports. Plastic compression fittings are generally located on service pipes.

Your Choice (weight: 0) --Low

<<< Choice Changed From >>> --Moderate

■ **Manufacturing Defects (MW-Mfg) (Service Pipe - Clear Plastic)**

- Are failures in this section/component increasing or decreasing? (MW302)

Data Source:

WAM R104/109 Leak Reports Material Failure Reports - PHMSA For years 2005 through 2009, Legacy leak data does not provide sufficient enough information to discern if a leak due to material failure was on a clear plastic service. Therefore, a value of (14) was entered, which was the average number of leaks for years 2010 through 2014, in which reliable data was available.

Your Choice (weight: 0) --

Table 11.113. End
of Year

	Failures
In 2005	14
In 2006	14
In 2007	14
In 2008	14
In 2009	14
In 2010	13
In 2011	20
In 2012	5
In 2013	11
In 2014	22

<<< Choice Changed From >>> --

Table 11.114. End
of Year

	Failures
In 2005	0
In 2006	0
In 2007	1
In 2008	0
In 2009	3
In 2010	2
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- Do failures occur more frequently than the scheduled leak survey intervals? (MW303)

Data Source:

LKMS Database (2006-2009) WAM R104/109 Leak Report

Your Choice (weight: 0) --Yes

<<< Choice Changed From >>> --No

- What is the likelihood that a leak in this section will become a Grade 1 leak? (MW306)

Data Source:

WAM R104/109 Leak Reports. Approximately 30% of clear plastic service leaks are initially graded as Grade 1.

Your Choice (weight: 1) --High

<<< Choice Changed From >>> --Low

■ **Manufacturing Defects (MW-Mfg) (Fittings - Mechanical Joint)**

- How often do failures occur in this section? (MW301)

Data Source:

LKMS Database (2006-2009) WAM R104/109 Leak Reports

Your Choice (weight: 3) --More than once per year

<<< Choice Changed From >>> --Less than once per 5 years

- Are failures in this section/component increasing or decreasing? (MW302)

Data Source:

WAM R104/109 Leak Reports Material Failure Reports - PHMSA For years 2005 through 2009, Legacy leak data does not provide sufficient enough information to discern if a leak due to material defect was on a mechanical fitting. Therefore, a value of (63) was entered, which was the average number of leaks for years 2010 through 2014, in which more reliable data was available.

Your Choice (weight: 0) --

Table 11.115. End
of Year

	Failures
In 2005	63
In 2006	63
In 2007	63
In 2008	63
In 2009	63
In 2010	63
In 2011	53
In 2012	47
In 2013	82
In 2014	71

<<< Choice Changed From >>> --

Table 11.116. End
of Year

	Failures
In 2005	0
In 2006	0
In 2007	0
In 2008	0
In 2009	0
In 2010	0
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- SHRIMP has determined that leaks, failures or damages are not increasing.(see guidance).

Do you accept this determination? (MW302dok)

Your Choice (weight: 0) --Accept

<<< Choice Changed From >>> --Do Not Accept

- Have your current material specification requirements and construction/installation procedures been modified to address this issue? (MW304)

Data Source:

There have not been specific procedure changes or specification updates for the use or installation of mechanical fittings.

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- What is the likelihood that a leak in this section will become a Grade 1 leak? (MW306)

Data Source:

LKMS Database (2006-2009) WAM R104/109 Leak Reports

Your Choice (weight: 0) --Low

<<< Choice Changed From >>> --High

- What would be the impact on the utility and its customers if this section were to fail? (MWCSQ4)

Data Source:

SME William Good, Supervisory Engineer, PGL Compliance Group Material Failure Database

Your Choice (weight: 0) --Low

<<< Choice Changed From >>> --Moderate

Excavation Damage Threat

- **Excavation Damage (OFEXC) (PEOPLES GAS - Entire System)**

- How many excavation caused damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFEXC105a)

Data Source:

Hit Database is not currently used to capture excavation damages that did not result in a leak. Answered by System Integrity Manager Vip Kapoor.

Your Choice (weight: 0) --

Table 11.117. End of
Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0

AG 4.01 Attach 05

In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

<<< Choice Changed From >>> --

Table 11.118. End of Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

- How many excavation tickets (receipt of information by the underground facility operator from the one-call system) were received during the years shown? (OFEXC106)

Data Source:

Estimates for 2005-2006 from previous DIMP entries. PHMSA Annual Reports (2007-2014)

Your Choice (weight: 0) --

Table 11.119. End of Year

	Damages Previously Entered	Excavation Tickets	Damages Per 1000 Tickets
In 2005	580	92000	6
In 2006	607	92000	7
In 2007	582	92459	6
In 2008	659	92765	7
In 2009	563	93046	6
In 2010	554	91201	6
In 2011	706	115626	6
In 2012	955	161666	6
In 2013	905	169355	5
In 2014	746	176227	4

<<< Choice Changed From >>> --

Table 11.120. End of Year

	Damages Previously Entered	Excavation Tickets	Damages Per 1000 Tickets
In 2005	580	92000	6
In 2006	607	92000	7
In 2007	582	92459	6
In 2008	659	92765	7
In 2009	563	93046	6
In 2010	554	91201	6
In 2011	0	0	0
In 2012	0	0	0
In 2013	0	0	0
In 2014	0	0	0

- Provide Additional Information (OFEXC106e)

Your Choice (weight: 0) --

■ **Concentrated Damages (OFEXC-Conc) (PEOPLES GAS - Entire System)**

- You previously entered this information regarding excavation damages and tickets during the years shown.

Click Next to proceed. (OFEXC206)

Data Source:

PHMSA 7100 Annual Reports

Your Choice (weight: 0) --

Table 11.121. End of Year

	Damages Previously Entered	Excavation Tickets Previously Entered	Damages Per 1000 Tickets
In 2005	580	92000	6
In 2006	607	92000	7
In 2007	582	92459	6
In 2008	659	92765	7
In 2009	563	93046	6
In 2010	554	91201	6
In 2011	706	115626	6
In 2012	955	161666	6
In 2013	905	169355	5
In 2014	746	176227	4

<<< Choice Changed From >>> --

Table 11.122. End of Year

	Damages Previously Entered	Excavation Tickets Previously Entered	Damages Per 1000 Tickets
In 2005	580	92000	6
In 2006	607	92000	7
In 2007	582	92459	6
In 2008	659	92765	7
In 2009	563	93046	6
In 2010	554	91201	6
In 2011	0	0	0
In 2012	0	0	0
In 2013	0	0	0
In 2014	0	0	0

- Are these excavation damages concentrated in certain locations or distributed across the entire system? (OFEXC207)

Data Source:

PGL Hit Database - Hits to company facilities are generally distributed evenly across all three districts. Answered by V. Kapoor SME Manager System Integrity.

Your Choice (weight: 0) --Distributed across the entire system

<<< Choice Changed From >>> --Concentrated in certain locations

■ **Crew or Contractor Damages (OFEXC-Crew) (PEOPLES GAS - Entire System)**

- How many excavation damages were caused by the your crews and/or your contractors on the system during the years shown? (OFEXC116)

Data Source:

Your Choice (weight: 0) --

Table 11.123. End of Year

	Damages Caused By Your Crews	Damages Caused By Your Contractors
In 2005	2	0
In 2006	6	5
In 2007	4	34
In 2008	6	25
In 2009	4	3
In 2010	6	3
In 2011	12	104
In 2012	12	112
In 2013	9	56
In 2014	8	96

<<< Choice Changed From >>> --

Table 11.124. End of Year

	Damages Caused By Your Crews	Damages Caused By Your Contractors
In 2005	2	0
In 2006	4	3
In 2007	3	27
In 2008	5	30
In 2009	1	13
In 2010	6	15
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC125)

Data Source:

PGL Facilities Damage database

Your Choice (weight: 9) --

Steel

Plastic

Cast Iron

Other

<<< Choice Changed From >>> --

No Damages

- Enter sections for assessing the threat of crew or contractor excavation damages. (OFEXC120a)

Data Source:

PGL Facilities Database

Your Choice (weight: 0) --

Table 11.125. Crew Name

	Company or Contractor	Description
Peoples Gas	Peoples Gas	Damages to PGL facilities by PGL Crews
Peoples Gas Contractors	Peoples Gas Contractors	Damages to PGL facilities by 2nd Parties

<<< Choice Changed From >>> --

Table 11.126. Crew Name

	Company or Contractor	Description
Various	Meade	PGL Contractor
Crew_01		
Crew_02		
Crew_03		
Crew_04		
Crew_05		

- Provide Additional Information (OFEXC120c)

Your Choice (weight: 0) --

- **Crew or Contractor Damages (OFEXC-Crew-1a) (Peoples Gas - Damages to PGL facilities by PGL Crews (Peoples Gas))**

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC125)

Data Source:

Facilities Damage Database

Your Choice (weight: 2) --

Plastic

<<< Choice Changed From >>> --

No Damages

- Have the (crews/contractors/excavators) identified for this section caused damage that resulted in a reportable incident? (OFEXCCSQ1)

Data Source:

Facilities Damage Database and PHMSA Incident Reporting.

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- Considering disruption of service and cost to return the system to service, how serious are the damages caused by the (crews/contractors/excavators) identified for this section when compared to all other excavation caused damages? (OFEXCCSQ2)

Data Source:

Answered by V. Kapoor SME Manager System Integrity.

Your Choice (weight: 0) --Less serious

<<< Choice Changed From >>> --About the same

■ **Third Party Damages (OFEXC-Third) (PEOPLES GAS - Entire System)**

- How many excavation damages were caused by third parties during the years shown? (OFEXC128)

Data Source:

PGL Facilities Damage Database. No reliable info for 2005. Answered by William Houghton

Your Choice (weight: 0) --

Table 11.127. End of Year

	Third Party Damages
In 2005	0
In 2006	1044
In 2007	1027
In 2008	953
In 2009	724
In 2010	735
In 2011	913
In 2012	1156
In 2013	1043
In 2014	1099

<<< Choice Changed From >>> --

Table 11.128. End of Year

	Third Party Damages
In 2005	182
In 2006	803
In 2007	770
In 2008	731
In 2009	564
In 2010	585
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC134)

Data Source:

Facilities Damage Database

Your Choice (weight: 9) --

Steel

Plastic

Cast Iron

Other

<<< Choice Changed From >>> --

Steel

Plastic

Cast Iron

- Enter sections for assessing the threat of third party excavation damages. (OFEXC130a)

Data Source:

Decision to list these three parties is based on the high number of hits they cause vs. total hits. Answered by V. Kapoor SME Manager System Integrity.

Your Choice (weight: 0) --

Table 11.129. Third Party

Name	Description
City of Chicago, Water	Chicago Water Dept
Benchmark Construction	Water Main Installation Contractor for City of Chicago
Joel Kennedy Construction	Water Main Installation Contractor for City of Chicago
Third_Party_05	

<<< Choice Changed From >>> --

Table 11.130. Third Party

Name	Description
City of Chicago, Water	Chicago Water Dept
City of Chicago, All Other	All Other Chicago City Depts Except Water
Third_Party_03	
Third_Party_04	
Third_Party_05	

- Provide Additional Information (OFEXC130c)

Your Choice (weight: 0) --

- **Third Party Damages (OFEXC-Third-1a) (City of Chicago, Water - Chicago Water Dept)**

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC134)

Data Source:

PGL Facilities Damage Database

Your Choice (weight: 9) --

Steel

Plastic

Cast Iron

Other

<<< Choice Changed From >>> --

Steel

Plastic

Other

- **Third Party Damages (OFEXC-Third-1a) (Benchmark Construction - Water Main Installation Contractor for City of Chicago)**

- Are excavation damages caused by failure to protect pipe during backfill operations? (OFEXC134)

Data Source:

PGL Facilities Damage Database

Your Choice (weight: 9) --

Steel

Plastic

Cast Iron

Other

<<< Choice Changed From >>> --

Steel

Plastic

- Have the (crews/contractors/excavators) identified for this section caused damage that resulted in a reportable incident? (OFEXCCSQ1)

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- Considering disruption of service and cost to return the system to service, how serious are the damages caused by the (crews/contractors/excavators) identified for this section when compared to all other excavation caused damages? (OFEXCCSQ2)

Data Source:

PGL Facilities Damage Database

Your Choice (weight: 0.1) --About the same

<<< Choice Changed From >>> --More serious

Natural Forces Threat

- **Natural Forces (OFNF) (PEOPLES GAS - Entire System)**

- How many natural forces damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFNF101nr)

Data Source:

Data not available.

Your Choice (weight: 0) --

Table 11.131. End of
Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0

AG 4.01 Attach 05

In 2012	0	
In 2013	0	
In 2014	0	

<<< Choice Changed From >>> --

Table 11.132. End of Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

- Here is a summary of your natural forces damages during the years shown.

Click Next to Continue. (OFNF101)

Your Choice (weight: 0) --

Table 11.133. End of Year

	Leak Repairs	Damages Not Reported	Total
In 2005	86	0	86
In 2006	125	0	125
In 2007	324	0	324
In 2008	425	0	425
In 2009	337	0	337
In 2010	231	0	231
In 2011	266	0	266
In 2012	134	0	134
In 2013	402	0	402
In 2014	418	0	418

<<< Choice Changed From >>> --

Table 11.134. End of Year

	Leak Repairs	Damages Not Reported	Total
In 2005	86	0	86
In 2006	125	0	125
In 2007	324	0	324
In 2008	425	0	425
In 2009	337	0	337
In 2010	231	0	231
In 2011	0	0	0
In 2012	0	0	0
In 2013	0	0	0
In 2014	0	0	0

- Enter sections of concentrated damage repairs. (OFNF105)

Your Choice (weight: 0) --

Table 11.135. Section

	Mains	Services	Description
Entire System	3244.131	515719	Entire System Except 6" Diameter Cast Iron Mains
6" Cast Iron Mains	1083.114	0	6" Diameter Cast Iron Mains

	0.000	0	
	0.000	0	
	0.000	0	
	0.000	0	
	0.000	0	

<<< Choice Changed From >>> --

Table 11.136. Section

	Mains	Services	Description
Natural Forces Damage on Mains	4132.520	516099	Main Pipe
Natural Forces Damage on Services	0.000	1	Service Pipe
Main Pipe Downtown	1.000	0	Mains in Downtown Business District
Service Pipe Downtown	0.000	1	Services in Downtown Business District
Mains Around Regulator Station	1.000	0	Mains Around Regulator Station
Other	1.000	1	Sink Holes, Frost Heave, Water in Regulators
High Pressure CP Steel Mains or Services	23.910	140	HP Cath. Protected Steel Main & Service Pipe

- Provide Additional Information (OFNF105a)

Your Choice (weight: 0) --

▪ **Concentrated Area (OFNF-1a) (Entire System - Entire System Except 6" Diameter Cast Iron Mains)**

- Do damages repaired per year average one (1) or more? (OFNF101)

Data Source:

2005-2009, Natural Force leaks for this section (non 6"CI) normalized against known leaks for 2010-2014. Approximately 42% of leaks were on non 6"CI for those years. 2010-2014 leaks from WAM R104/109 Cleared Leak Reports.

Your Choice (weight: 0) --

Table 11.137. End of Year

	Damages Repaired
In 2005	36
In 2006	52
In 2007	136
In 2008	178
In 2009	141
In 2010	61
In 2011	95
In 2012	59
In 2013	187
In 2014	206

<<< Choice Changed From >>> --

Table 11.138. End of Year

	Damages Repaired
In 2005	0
In 2006	90
In 2007	275
In 2008	321
In 2009	280
In 2010	167
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- What would be the impact on the utility and its customers if this section were to fail? (OFNFCSQ4)

Data Source:

This section reflects PGLS's system as a whole.

Your Choice (weight: 0) --Low

<<< Choice Changed From >>> --High

■ **Concentrated Area (OFNF-1a) (6" Cast Iron Mains - 6" Diameter Cast Iron Mains)**

- Do damages repaired per year average one (1) or more? (OFNF101)

Data Source:

2005-2009, Natural Force leaks for this section (6"CI Main) normalized against known leaks for 2010-2014. Approximately 58% of leaks were on 6"CI Mains for those years. 2010-2014 leaks from WAM R104/109 Cleared Leak Reports.

Your Choice (weight: 0) --

Table 11.139. End of Year

	Damages Repaired
In 2005	49
In 2006	72
In 2007	188
In 2008	247
In 2009	196
In 2010	75
In 2011	143
In 2012	111
In 2013	208
In 2014	216

<<< Choice Changed From >>> --

Table 11.140. End of Year

	Damages Repaired
In 2005	0
In 2006	35
In 2007	49
In 2008	104
In 2009	57
In 2010	64
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- Have natural forces caused leaks, failures or damages to steel or plastic pipeline in the system/section? (OFNF303)

Data Source:

Section is specifically for 6" CI Main

Your Choice (weight: 0) --No

<<< Choice Changed From >>> --Yes

- Are the pressure and/or diameter of this section greater than or about the same as the system as a whole? (OFNFCSQ1)

Data Source:

Section is specifically for 6" CI, which is slightly larger diameter than system mains and services as a whole.

Your Choice (weight: 0.1) --Somewhat greater

<<< Choice Changed From >>> --About the same

Other Outside Forces Threat

• Other Outside Forces (OFOTHR) (PEOPLES GAS - Entire System)

- How many other outside forces damages not resulting in leaks reported on the PHMSA 7100.1-1 form have occurred during the years shown? (OFOTHR101nr)

Data Source:

Data not available.

Your Choice (weight: 0) --

Table 11.141. End of
Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

<<< Choice Changed From >>> --

Table 11.142. End of
Year

	Mains	Services
In 2005	0	0
In 2006	0	0
In 2007	0	0
In 2008	0	0
In 2009	0	0
In 2010	0	0
In 2011	0	0
In 2012	0	0
In 2013	0	0
In 2014	0	0

- Here is a summary of your other outside forces damages during the years shown.

Click Next to Continue. (OFOTHR101)

Your Choice (weight: 0) --

Table 11.143. End of Year

	Leak Repairs	Damages Not Reported	Total
In 2005	71	0	71
In 2006	14	0	14
In 2007	22	0	22

AG 4.01 Attach 05

In 2008	18	0	18
In 2009	5	0	5
In 2010	22	0	22
In 2011	14	0	14
In 2012	91	0	91
In 2013	61	0	61
In 2014	40	0	40

<<< Choice Changed From >>> --

Table 11.144. End of Year

	Leak Repairs	Damages Not Reported	Total
In 2005	71	0	71
In 2006	14	0	14
In 2007	22	0	22
In 2008	18	0	18
In 2009	5	0	5
In 2010	22	0	22
In 2011	0	0	0
In 2012	0	0	0
In 2013	0	0	0
In 2014	0	0	0

- Enter sections of concentrated damage repairs. (OFOTHR105)

Your Choice (weight: 0) --

Table 11.145. Section

	Mains	Services	Description
Other Outside Force Damage - Services	0.000	515719	Other Outside Force Damages on Service Pipes
Other Outside Force Damage - Mains	4327.245	0	Other Outside Force Damages on Main Pipes
	0.000	0	
	0.000	0	
	0.000	0	
	0.000	0	
	0.000	0	

<<< Choice Changed From >>> --

Table 11.146. Section

	Mains	Services	Description
Other Outside Force Damage on Services	4131.520	516100	Service Pipe
Other Outside Force Damage on Mains	1.000	0	Main Pipe
Service Pipe Downtown	0.000	1	Services in Downtown Business District
Main Pipe Downtown	1.000	0	Mains in Downtown Business District
Other	1.000	1	Vehicle Hits, Meter & Regulator Theft, Damage During Remodeling, Items Falling on Meters & Regulators, Ice Buildup on Regulators
Main Pipe Around Regulator Station	1.000	0	Main Pipe Around Regulator Station
High Pressure CP Steel Mains & Services	23.910	140	HP Cathodically Protected Steel Mains & Services

- Provide Additional Information (OFOTHR105a)

Your Choice (weight: 0) --

- **Other Outside Forces (OFOTHR-1a) (Other Outside Force Damage - Services - Other Outside Force Damages on Service Pipes)**

- Do damages repaired per year average one (1) or more? (OFOTHR101)

Data Source:

LKMS and WAM Leak Reporting Databases

Your Choice (weight: 0) --

Table 11.147. End of Year

	Damages Repaired
In 2005	14
In 2006	8
In 2007	13
In 2008	14
In 2009	5
In 2010	19
In 2011	14
In 2012	85
In 2013	51
In 2014	32

<<< Choice Changed From >>> --

Table 11.148. End of Year

	Damages Repaired
In 2005	0
In 2006	8
In 2007	13
In 2008	14
In 2009	5
In 2010	19
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- Have below ground facilities been damaged due to heavy vehicles driving along or over the facility location? (OFOTHR302)

Data Source:

LKMS and WAM Leak Reporting Databases

Your Choice (weight: 4) --Yes

<<< Choice Changed From >>> --No

- What would be the impact on the utility and its customers if this section were to fail? (OFOTHRCSQ4)

Your Choice (weight: 0) --Low

<<< Choice Changed From >>> --High

■ **Other Outside Forces (OFOTHR-1a) (Other Outside Force Damage - Mains - Other Outside Force Damages on Main Pipes)**

- Do damages repaired per year average one (1) or more? (OFOTHR101)

Your Choice (weight: 0) --

Table 11.149. End of Year

	Damages Repaired
In 2005	57
In 2006	6
In 2007	9

AG 4.01 Attach 05

In 2008	4
In 2009	0
In 2010	3
In 2011	0
In 2012	6
In 2013	10
In 2014	8

<<< Choice Changed From >>> --

Table 11.150. End of Year

	Damages Repaired
In 2005	0
In 2006	6
In 2007	9
In 2008	4
In 2009	0
In 2010	3
In 2011	0
In 2012	0
In 2013	0
In 2014	0

- Are above ground facilities being hit by vehicles? (OFOTHR301)

Data Source:

LKMS and WAM Leak Reports

Your Choice (weight: 5) --Yes

<<< Choice Changed From >>> --No

- Are the pressure and/or diameter of this section greater than or about the same as the system as a whole? (OFOTHRCSQ1)

Data Source:

This section (main pipe) is generally larger diameter/higher pressure than the system as a whole.

Your Choice (weight: 0.1) --Somewhat greater

<<< Choice Changed From >>> --About the same

Other Threats Threat

• Other Threats (OTHR) (PEOPLES GAS - Entire System)

- Enter, on a separate line below, a name for each Other Threat that you are experiencing and a brief description of the problem. (OTHR102a)

Your Choice (weight: 0) --

Table 11.151. Section

	Description
Bell Joints & Mechanical Joints	Leaking Main Bell & Mechanical Joints Due to Age
Other Outside Force Damage - Crossbores	Gas Pipe Bored Through Sewer Lateral
Incorrect Operations - Non-	Installation of Non-Approved Materials

Approved Material	Installation of Non-Approved Materials
Inaccessible Valves	Paved Over, Dirt in B-Box
Meters/Shutoffs Inaccessible	No Access to Meter or Shutoff
Incorrect Operations - Improper Odorization	Too Little or Much Mercaptin
Corrosion - Cased Pipelines	Cathodic Protected Steel Pipelines inside Metallic Casings
Excavation Damage - Critical Facilities	Excavation near HP Pipelines, >=16" MP Pipelines, Vaults, Remote Operated Valves, and Current Rectifiers
Other Outside Force - Occupant Use	Unauthorized Turn-on By Customer
Excavation Damage - Inactive Services	Service Pipes Designated as Inactive
Other - Soft Closed Accounts	Supply to Vacant Property Remaining Active

<<< Choice Changed From >>> --

Table 11.152. Section

	Description
Bell Joints & Mechanical Joints	Leaking Main Bell & Mechanical Joints
Sewer Lateral Cross Bores	Gas Pipe Bored Through A Sewer Lateral
Services - Bare & Coated Steel, Clear Plastic, Copper, CI/DI	Services - Bare & Coated Steel, Clear Plastic, Copper, CI/DI
Inaccessible Valves	Paved Over, Dirt in B-Box
Meters/Shutoffs Inaccessible	No Access to Meter or Shutoff
Under Odorization	Too Little Mercaptin
Over Odorization	Too Much Mercaptin
Other - Main Pipe	Other Threats to Main Pipe
Other - Service Pipe	Other Threats to Service Pipe
Other - Mains in Downtown	Main Pipe in the Downtown Business District
Other - Services in Downtown	Service Pipe in the Downtown Business District
Other - High Pressure CP Steel Mains & Services	HP Cathodically Protected Steel Main & Service Pipe
Other - Main Pipe Around Regulator Station	Main Pipe Around Regulator Station
Other - Other (Corroded/Loosened Bolts, Dresser Couplings, Barrels Rotted Out	Bolts on Mechanical Joints, Dresser Couplings Loose, Barrels Rotted Out
Corrosion on Service Pipe	Corrosion on Service Pipe
Corrosion on Main Pipe	Corrosion on Main Pipe
Corrosion on Service Pipe Downtown	Service Pipe Corrosion in Downtown Business District
Corrosion on Main Pipe Downtown	Main Pipe Corrosion in Downtown Business District
Incorrect Operations - Service Pipe	Incorrect Operations - Service Pipe
Corrosion Other (Stray Current, Bare Steel Lamp Stubs)	Stray Current from Customer, Trains; Lamp Stubs
Corrosion - Main Pipe Around Regulator Station	Corrosion on Main Pipe Around Regulator Station
Incorrect Operations - Main Pipe	Incorrect Operations on Main Pipe
Incorrect Operations on Service Pipe Downtown	Service Pipe in the Downtown Business District
Corrosion On High Pressure CP Steel Mains & Services	Corrosion on HP Cathodically Protected Steel Mains & Services
Incorrect Operations on Main Pipe Downtown	Main Pipe in the Downtown Business District
Incorrect Operations - Other	Constab Fittings not Chamfered Correctly, Cold Coiled Pipe not Seating Properly
Incorrect Operations - Main Pipe Around Regulator Station	Main Pipe Around Regulator Station
Incorrect Operations on High Pressure CP Steel Mains & Services	HP Cathodically Protected Steel Mains & Services

- Provide Additional Information (OTHR102c)

Your Choice (weight: 0) --

- **Other (OTHR-1a) (Bell Joints & Mechanical Joints - Leaking Main Bell & Mechanical Joints Due to Age)**

- Please describe the failures or problems. (OTHR110)

Data Source:

LKMS database WAM R104/109 Cleared Leak Report

Your Choice (weight: 0) --Leaking Mechanical & Bell Joints on Cast Iron and Ductile Iron Mains. 2005-2009 LKMS database - Totals for "Other" on are 5015 main repairs. A majority (71%) of the mains are low pressure and the leaks were on a Bell & Spigot joint. Cast Iron that is 6" in diameter is the most common cast iron size in the system and consist of 61% of the leaks for "Other" main repairs. Main repairs were distributed among the shops: 46% North Shop, 28% Central Shop, and 26% South Shop. In the LKMS database, sort LKDSC column using text filters Joint, BJ, MJ. 2010-2014 R104/109 Report - 2,206 "Other" Main Repairs on Cast Iron, with the majority occurring in North District: 58% North Shop, 26% South Shop, 16% Central Shop. There has been a drastic reduction in the number of reported "Other" leaks due to an effort to better classify the cause of the leak when it is encountered. 6" LP CI is still the most common cast iron size and pressure in the system.

<<< Choice Changed From >>> --Leaking Mechanical & Bell Joints on Cast Iron and Ductile Iron Mains. 2005-2009 LKMS database - Totals for "Other" on are 5015 main repairs. A majority (71%) of the mains are low pressure and the leaks were on a Bell & Spigot joint. Cast Iron that is 6" in diameter is the most common cast iron size in the system and consist of 61% of the leaks for "Other" main repairs. Main repairs were distributed among the shops: 46% North Shop, 28% Central Shop, and 26% South Shop. In the LKMS database, sort LKDSC column using text filters Joint, BJ, MJ.

- Please describe any action you have taken (or plan to take) to address the failure previously entered. (OTHR111)

Data Source:

LKMS/WAM database remarks section, management directive and procedures.

Your Choice (weight: 0) --Mechanical & Bell joint repairs - injecting PermaBond Internal Sealant, External seal with Miller Encapsulant. Training and Qualifying contractors to assist in joint repairs. Accelerated Main Replacement Project.

<<< Choice Changed From >>> --Mechanical & Bell joint repairs - tighten or replace bolts, inject permaBond gaseal, external seal with Miller encapsulant. Accelerated Main Replacement Project.

■ **Other (OTHR-1a) (Other Outside Force Damage - Crossbores - Gas Pipe Bored Through Sewer Lateral)**

- Please describe any action you have taken (or plan to take) to address the failure previously entered. (OTHR111)

Your Choice (weight: 0) --Section 920 of Operations and Maintenance Manual: Damage Prevention - Trenchless Technologies Distribution Department General Order 0.801: Procedure and Policies for Addressing Legacy Sewer Crossbores Multiple Administrative Directives outlining use of pre and post camera technologies to document path of directionally-drilled main

<<< Choice Changed From >>> --Horizontal Direction Drilling procedure, Distribution Department General Order 6.100, details actions to take before, during and after drilling to mitigate this threat.

■ **Other (OTHR-1a) (Incorrect Operations - Non-Approved Material - Installation of Non-Approved Materials)**

- Please describe the failures or problems. (OTHR110)

Data Source:

SME William Good - Supervisory Engineer Compliance Group

Your Choice (weight: 0) --This threat addresses the use or installation of unauthorized materials, including pipe, fittings, meters, regulators, etc.

<<< Choice Changed From >>> --Average Leaks per 1000 services from 2007-2009: Unprotected Coated Steel - 14.3. Unprotected Bare Steel - 5.3. Cast Iron - 4.7. Ductile Iron - 2.8. Clear (CAB) Plastic - 2.2. Copper - 1.9

- Please describe any action you have taken (or plan to take) to address the failure previously entered. (OTHR111)

Data Source:

SME William Good - Supervisory Engineer Compliance Group

Your Choice (weight: 0) --As a result of the threat of unauthorized materials being installed, the Standards Group was developed in order to track and manage the types of materials that are approved for use.

<<< Choice Changed From >>> --AMRP - Accelerated Main Replacement Project. Repair/replace services through the normal course of activities.

■ **Other (OTHR-1a) (Incorrect Operations - Improper Odorization - Too Little or Much Mercaptin)**

- Please describe the failures or problems. (OTHR110)

Data Source:

SME Alonzo Foster - Supervisory Engineer Gas Operations

Your Choice (weight: 0) --If the odorant concentration level is too low, a gas leak may go undetected by sense of smell - leading to a potentially dangerous situation. If the concentration is too high, false leaks may be reported, diverting resources that would otherwise be able to respond to real emergencies.

<<< Choice Changed From >>> --If the odorant concentration level is too low, a gas leak may go undetected by sense of smell - leading to a potentially dangerous situation.

■ **Other (OTHR-1a) (Corrosion - Cased Pipelines - Cathodic Protected Steel Pipelines inside Metallic Casings)**

- Please describe the failures or problems. (OTHR110)

Data Source:

SME Max Meredith - Supervisory Engineer Corrosion Control Group

Your Choice (weight: 0) --There are 280 known cathodically protected steel mains and services (193 in the Distribution System) that are encased in either a steel or cast iron casing pipe. The threat stems from the chance of a short between the carrier and casing pipes, a short that would not be detected by standard pipe to soil inspections. The majority of the casings are pipelines that are both larger diameter and higher pressure than the rest of the distribution system as a whole. Additionally, most of the casings span difficult to reach areas (railroads/highways), so in the even of a leak, repair of the encased section of main would be extremely difficult.

<<< Choice Changed From >>> --If the odorant concentration is too high, the mercaptin smell will be noticeable to customers after combustion. This will lead to increased calls for gas leaks when no such leak exists.

- Please describe any action you have taken (or plan to take) to address the failure previously entered. (OTHR111)

Data Source:

SME Max Meredith - Supervisory Engineer Corrosion Control Group

Your Choice (weight: 0) --All casings and their respective carrier pipes are tested annually for isolation. If it is determined that a short between the structures exists, possible remediation actions are reviewed (re-insulation, removal of casing, retirement of carrier, etc.). Pending remediation projects are reviewed semi-weekly. Procedures Developed: Corrosion Control Order 8.210: Corrosion Inspection Procedure for Carrier/Casing Test Points Corrosion Control Order 8.220: ACVG Survey for Testing Carrier-Casing Isolation

<<< Choice Changed From >>> --Odorant concentration levels are monitored and tested per the O&M Plan Exhibit III Gas Control and Odorization manual.

11.5.6. ANALYSIS OF RISK BASED PERFORMANCE MEASURES

Overview

This section presents data to help measure the effectiveness of the Additional/Accelerated Actions. These data (Metrics) are the Performance Measure(s) that you selected to measure the effectiveness of each Additional/Accelerated Action.

At this time, only numeric Performance Measures for leak, failure, damage, etc. data are included.

Mann-Kendall Analysis

Mann-Kendall is a tool used by statisticians to assess whether a time-ordered data set exhibits an increasing or decreasing trend. SHRIMP™ uses a Mann-Kendall analysis to identify trends in performance measure data. This is maintained year by year as you revise your plan. If this data is being used as a metric, a table of the data you have entered will be shown followed by a table showing the heading "MK Metrics (S-Values)".

These S-Values are computed for all the years you have used SHRIMP™ to generate your plan. If you created a plan for 2009 and then created a plan for 2012, there will be an S-Value for the years 2009, 2010, 2011 and 2012.

Without going into details on the Mann-Kendall process, if the S-Value is greater than 10, the data being evaluated is considered to be "Increasing". If it is 10 or less, it is considered to be "Not Increasing". Therefore, Additional/Accelerated Action you perform must decrease the S-Value to be effective.

S-Values are presented for all the years because it is possible that SHRIMP™ may continue to conclude your data are "Increasing" even if you have reduced the leaks, etc. If the S-Values are moving downward, your actions are having a positive effect.

For performance measures where there is ten years or more of data, year 1 of the last 10 years is the baseline for the Mann-Kendall trend analysis.

For performance measures where there is less than ten years data, the earliest year for which data is available is the baseline for the Mann-Kendall trend analysis.

Analysis of Risk Based Performance Measures

- a. For **excavation damage due to third party damages** on the **City of Chicago, Water** section, PEOPLES GAS will:

- Performance Measure --

Record the number of hits to gas facilities per 1000 tickets caused by the City of Chicago Water Department.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking City of Chicago - Water Department - Hits per 1000 Tickets (PMMETRIC)

Your Data --

Table 11.153. End of Year

	City of Chicago - Water Department - Hits per 1000 Tickets
In 2005	0.000
In 2006	0.000
In 2007	233.000
In 2008	247.000
In 2009	264.000
In 2010	249.000
In 2011	248.000
In 2012	260.000
In 2013	241.000
In 2014	222.000

Mann-Kendall Analysis --

Table 11.154. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Increasing	18
In 2010	Increasing	20
In 2011	Increasing	19

In 2012	Increasing	19
In 2013	Increasing	17
In 2014	Increasing	12

These metrics indicates that this performance measure is not changing in a statistically significant way.

b. For **excavation damage due to third party damages** on the **Benchmark Construction** section, PEOPLES GAS will:

- Performance Measure --

Record the number of hits to gas facilities per 1000 tickets caused by Benchmark Construction.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Benchmark Construction - Hits per 1000 Tickets (PMMETRIC)

Your Data --

Table 11.155. End of Year

	Benchmark Construction - Hits per 1000 Tickets
In 2005	0.000
In 2006	0.000
In 2007	16.000
In 2008	63.000
In 2009	61.000
In 2010	0.000
In 2011	3.000
In 2012	64.000
In 2013	87.000
In 2014	64.000

Mann-Kendall Analysis --

Table 11.156. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Increasing	16
In 2010	Not Increasing	10
In 2011	Not Increasing	8
In 2012	Increasing	11
In 2013	Increasing	19
In 2014	Increasing	25

These metrics indicates that this performance measure is not changing in a statistically significant way.

c. For **excavation damage due to third party damages** on the **Joel Kennedy Construction** section, PEOPLES GAS will:

- Performance Measure --

Record the number of hits to gas facilities per 1000 tickets caused by Joel Kennedy Construction.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Joel Kennedy Construction - Hits per 1000 Tickets (PMMETRIC)

Your Data --

Table 11.157. End of Year

	Joel Kennedy Construction - Hits per 1000 Tickets
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	22.000
In 2013	37.000

Mann-Kendall Analysis --

Table 11.158. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	7
In 2013	Increasing	15
In 2014	Increasing	24

These metrics indicates that this performance measure is increasing.

d. For **other threats** on the **Bell Joints & Mechanical Joints** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.159. End of Year

	Frequency of Failures
In 2005	500.000
In 2006	500.000
In 2007	500.000
In 2008	500.000
In 2009	500.000
In 2010	500.000
In 2011	498.000
In 2012	481.000
In 2013	458.000
In 2014	446.000

Mann-Kendall Analysis --

Table 11.160. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	-7
In 2012	Not Increasing	-13
In 2013	Not Increasing	-21
In 2014	Not Increasing	-30

These metrics indicates that this performance measure is decreasing.

e. For **natural forces** on the **6" Cast Iron Mains** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks or failures due to natural forces repaired each year per mile of main (and/or per service) in the 6" Cast Iron Mains.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Failure Repairs Per Mile (PMMETRIC)

Your Data --

Table 11.161. End of Year

	Failure Repairs Per Mile
--	---------------------------------

AG 4.01 Attach 05

In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.068
In 2011	0.132
In 2012	0.085
In 2013	0.211
In 2014	0.230

Mann-Kendall Analysis --

Table 11.162. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	7
In 2011	Increasing	13
In 2012	Increasing	16
In 2013	Increasing	24
In 2014	Increasing	33

These metrics indicates that this performance measure is increasing.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Failure Repairs Per Service. (PMMETRIC)

Your Data --

Table 11.163. End of Year

	Failure Repairs Per Service.
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.164. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

f. For **natural forces** on the **Entire System** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks or failures due to natural forces repaired each year per mile of main (and/or per service) in the Entire System.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

AG 4.01 Attach 05

- Tracking Failure Repairs Per Mile (PMMETRIC)

Your Data --

Table 11.165. End of Year

	Failure Repairs Per Mile
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.030
In 2011	0.021
In 2012	0.034
In 2013	0.047
In 2014	0.042

Mann-Kendall Analysis --

Table 11.166. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	7
In 2011	Increasing	11
In 2012	Increasing	16
In 2013	Increasing	24
In 2014	Increasing	31

These metrics indicates that this performance measure is increasing.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Failure Repairs Per Service. (PMMETRIC)

Your Data --

Table 11.167. End of Year

	Failure Repairs Per Service.
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.124
In 2011	0.115
In 2012	0.053
In 2013	0.078
In 2014	0.112

Mann-Kendall Analysis --

Table 11.168. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	7
In 2011	Increasing	11
In 2012	Increasing	12
In 2013	Increasing	16
In 2014	Increasing	21

These metrics indicates that this performance measure is increasing.

- g. For **external corrosion on cast, wrought, ductile iron mains and services (larger than 8")** on the **Cast, Ductile, Wrought Iron (larger than 8")** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Cast, Ductile, Wrought Iron (larger than 8").

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Data --

Table 11.169. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	541.000	8	0.015
In 2006	530.000	4	0.008
In 2007	520.000	4	0.008
In 2008	510.000	20	0.039
In 2009	510.000	13	0.025
In 2010	500.985	11	0.022
In 2011	497.794	10	0.020
In 2012	481.072	23	0.048
In 2013	457.734	19	0.042
In 2014	446.040	13	0.029

Mann-Kendall Analysis --

Table 11.170. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	3
In 2010	Not Increasing	6
In 2011	Not Increasing	6
In 2012	Increasing	11
In 2013	Increasing	17
In 2014	Increasing	20

These metrics indicates that this performance measure is increasing.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.171. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	54	0	0.000
In 2006	53	0	0.000
In 2007	53	0	0.000
In 2008	52	0	0.000
In 2009	49	0	0.000
In 2010	50	0	0.000
In 2011	50	0	0.000
In 2012	47	0	0.000
In 2013	44	0	0.000
In 2014	43	0	0.000

Mann-Kendall Analysis --

Table 11.172. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

h. For **other outside forces** on the **Other Outside Force Damage - Services** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.173. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.174. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

i. For **external corrosion on cast, wrought, ductile iron mains and services (8" or smaller)** on the **Cast, Ductile, Wrought Iron (8" or smaller)** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Cast, Ductile, Wrought Iron (8" or smaller).

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Data --

Table 11.175. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	1482.000	34	0.023
In 2006	1448.000	42	0.029
In 2007	1409.000	66	0.047
In 2008	1372.790	61	0.044
In 2009	1360.192	43	0.032
In 2010	1351.624	36	0.027
In 2011	1323.627	23	0.017
In 2012	1249.642	71	0.057
In 2013	1194.919	65	0.054
In 2014	1148.814	52	0.045

Table 11.176. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Increasing	16
In 2010	Increasing	11
In 2011	Not Increasing	-1
In 2012	Not Increasing	2
In 2013	Not Increasing	8
In 2014	Increasing	11

These metrics indicates that this performance measure is decreasing.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.177. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	410	0	0.000
In 2006	400	0	0.000
In 2007	391	0	0.000
In 2008	381	0	0.000
In 2009	366	1	0.003
In 2010	397	0	0.000
In 2011	357	0	0.000
In 2012	326	1	0.003
In 2013	317	0	0.000
In 2014	304	0	0.000

Mann-Kendall Analysis --

Table 11.178. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	7
In 2010	Not Increasing	5
In 2011	Not Increasing	3
In 2012	Not Increasing	8
In 2013	Not Increasing	6
In 2014	Not Increasing	4

These metrics indicates that this performance measure is not changing in a statistically significant way.

j. For **equipment malfunctions due to failing other equipment** on the **Low Pressure Vaults** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.179. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000

AG 4.01 Attach 05

In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.180. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

k. For **other outside forces** on the **Other Outside Force Damage - Mains** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.181. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.182. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

l. For **material, weld or joint due to manufacturing defects** on the **Service Pipe** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are failures in this section/component increasing or decreasing? (MW302)

Table 11.183. End of Year
of Year

	Failures
In 2005	14
In 2006	14
In 2007	14
In 2008	14
In 2009	14
In 2010	13
In 2011	20
In 2012	5
In 2013	11
In 2014	22

Mann-Kendall Analysis --

Table 11.184. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	-7
In 2011	Not Increasing	1
In 2012	Not Increasing	-6
In 2013	Not Increasing	-12
In 2014	Not Increasing	-3

These metrics indicates that this performance measure is not changing in a statistically significant way.

m. For **equipment malfunctions due to failing other equipment** on the **Gate Stations** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.185. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.186. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

- n. For **external corrosion on bare, unprotected, steel mains and services** on the **Unprotected, Bare Steel** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Unprotected, Bare Steel.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Data --

Table 11.187. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	0.000	0	0.000
In 2006	0.000	0	0.000
In 2007	0.000	0	0.000
In 2008	0.000	0	0.000
In 2009	0.000	0	0.000
In 2010	0.000	0	0.000
In 2011	0.000	0	0.000
In 2012	0.000	0	0.000
In 2013	0.000	0	0.000
In 2014	0.000	0	0.000

Mann-Kendall Analysis --

Table 11.188. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.189. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	6957	46	0.007
In 2006	6735	51	0.008
In 2007	6497	76	0.012
In 2008	6198	71	0.011
In 2009	5922	100	0.017
In 2010	6295	34	0.005
In 2011	6250	9	0.001
In 2012	6098	14	0.002
In 2013	5677	37	0.007
In 2014	5227	20	0.004

Mann-Kendall Analysis --

Table 11.190. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Increasing	20
In 2010	Not Increasing	9

AG 4.01 Attach 05

In 2011	Not Increasing	-1
In 2012	Not Increasing	-8
In 2013	Not Increasing	-9
In 2014	Not Increasing	-14

These metrics indicates that this performance measure is decreasing.

- o. For **equipment malfunctions due to failing other equipment** on the **High Pressure to High Pressure Stations** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.191. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.192. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

- p. For **other threats** on the **Inaccessible Valves** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.193. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	447.000

AG 4.01 Attach 05

In 2011	346.000
In 2012	671.000
In 2013	816.000
In 2014	649.000

Mann-Kendall Analysis --

Table 11.194. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	7
In 2011	Increasing	11
In 2012	Increasing	16
In 2013	Increasing	24
In 2014	Increasing	29

These metrics indicates that this performance measure is increasing.

q. For **atmospheric corrosion** on the **Inside Atmospheric Corrosion** section, PEOPLES GAS will:

- Performance Measure --

Track the number of Inside Safety Inspections in which pipe condition was noted as poor due to corrosion.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Inside Safety Inspections - Atmospheric Corrosion (PMMETRIC)

Your Data --

Table 11.195. End of Year

	Inside Safety Inspections - Atmospheric Corrosion
In 2005	14.000
In 2006	77.000
In 2007	59.000
In 2008	36.000
In 2009	35.000
In 2010	22.000
In 2011	26.000
In 2012	54.000
In 2013	16.000
In 2014	22.000

Mann-Kendall Analysis --

Table 11.196. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	10
In 2010	Not Increasing	5
In 2011	Not Increasing	-1
In 2012	Not Increasing	-4
In 2013	Not Increasing	-10
In 2014	Not Increasing	-14

These metrics indicates that this performance measure is decreasing.

r. For **external corrosion on coated, unprotected, steel mains and services** on the **Unprotected, Coated Steel** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Unprotected, Coated Steel.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Table 11.197. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	0.000	0	0.000
In 2006	0.000	0	0.000
In 2007	0.000	0	0.000
In 2008	0.000	0	0.000
In 2009	0.000	0	0.000
In 2010	0.488	0	0.000
In 2011	0.224	0	0.000
In 2012	0.185	0	0.000
In 2013	0.341	2	5.865
In 2014	0.338	0	0.000

Mann-Kendall Analysis --

Table 11.198. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	8
In 2014	Not Increasing	7

These metrics indicates that this performance measure is increasing.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.199. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	181	1	0.006
In 2006	182	2	0.011
In 2007	185	1	0.005
In 2008	187	6	0.032
In 2009	186	2	0.011
In 2010	182	0	0.000
In 2011	181	0	0.000
In 2012	183	0	0.000
In 2013	180	3	0.017
In 2014	177	1	0.006

Mann-Kendall Analysis --

Table 11.200. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	9
In 2010	Not Increasing	0
In 2011	Not Increasing	-7
In 2012	Not Increasing	-12
In 2013	Not Increasing	-6
In 2014	Not Increasing	-6

These metrics indicates that this performance measure is decreasing.

s. For **equipment malfunctions due to failing other equipment** on the **Medium Pressure Vaults** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.201. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.202. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

t. For **material, weld or joint due to manufacturing defects** on the **Fittings** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are failures in this section/component increasing or decreasing? (MW302)

Your Data --

Table 11.203. End of Year

	Failures
In 2005	63
In 2006	63
In 2007	63
In 2008	63
In 2009	63
In 2010	63
In 2011	53
In 2012	47
In 2013	82
In 2014	71

Mann-Kendall Analysis --

Table 11.204. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	-7

AG 4.01 Attach 05

In 2012	Not Increasing	-13
In 2013	Not Increasing	-5
In 2014	Not Increasing	2

These metrics indicates that this performance measure is not changing in a statistically significant way.

u. For **equipment malfunctions due to failing valves** on the **Security Valves** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.205. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.206. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

v. For **external corrosion on other metal** on the **Other Metal** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Other Metal.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Data --

Table 11.207. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	0.000	0	0.000
In 2006	0.000	0	0.000
In 2007	0.000	0	0.000
In 2008	0.000	0	0.000
In 2009	0.000	0	0.000
In 2010	0.000	0	0.000
In 2011	0.000	0	0.000
In 2012	0.000	0	0.000

In 2013	0.000	0	0.000
In 2014	0.000	0	0.000

Mann-Kendall Analysis --

Table 11.208. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.209. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	20476	9	0.000
In 2006	19852	9	0.000
In 2007	19128	7	0.000
In 2008	18097	15	0.001
In 2009	17466	5	0.000
In 2010	17444	7	0.000
In 2011	17100	3	0.000
In 2012	15457	9	0.001
In 2013	13824	10	0.001
In 2014	13228	1	0.000

Mann-Kendall Analysis --

Table 11.210. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	5
In 2010	Not Increasing	3
In 2011	Not Increasing	1
In 2012	Not Increasing	6
In 2013	Increasing	12
In 2014	Not Increasing	9

These metrics indicates that this performance measure is not changing in a statistically significant way.

w. For **material, weld or joint due to known problem materials** on the **Known Material** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are failures in this section/component increasing or decreasing? (MW302)

Your Data --

Table 11.211. End of Year

	Failures
In 2005	7
In 2006	7
In 2007	7
In 2008	7

AG 4.01 Attach 05

In 2009	7
In 2010	2
In 2011	2
In 2012	19
In 2013	9
In 2014	4

Mann-Kendall Analysis --

Table 11.212. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	-7
In 2011	Not Increasing	-12
In 2012	Not Increasing	-3
In 2013	Not Increasing	3
In 2014	Not Increasing	-2

These metrics indicates that this performance measure is not changing in a statistically significant way.

x. For **equipment malfunctions due to failing valves** on the **Remote Oper Valves** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.213. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.214. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

y. For **external corrosion on coated, cathodically protected, steel mains and services** on the **Cathodic Protected, Coated Steel** section, PEOPLES GAS will:

- Performance Measure --

track the number of leaks caused by external corrosion per mile of main and per 1000 service lines on the Cathodic Protected, Coated Steel.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per mile increasing? (EC102)

Your Data --

Table 11.215. End of Year

	Miles of Mains	Corrosion Leaks Repaired	Repaired Leaks/mile
In 2005	1212.000	1	0.001
In 2006	1208.000	0	0.000
In 2007	1202.000	6	0.005
In 2008	1198.680	2	0.002
In 2009	1193.370	4	0.003
In 2010	1263.279	6	0.005
In 2011	1170.764	7	0.006
In 2012	1138.190	8	0.007
In 2013	1139.918	8	0.007
In 2014	1129.346	3	0.003

Mann-Kendall Analysis --

Table 11.216. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	10
In 2010	Increasing	14
In 2011	Increasing	18
In 2012	Increasing	21
In 2013	Increasing	28
In 2014	Increasing	26

These metrics indicates that this performance measure is increasing.

Data for this performance measure are entered into SHRIMP in the threat assessment interviews.

- Are repaired corrosion leaks per service increasing? (EC201)

Your Data --

Table 11.217. End of Year

	Number of Services	Corrosion Leaks Repaired	Repaired Leaks/service
In 2005	44751	15	0.000
In 2006	44031	23	0.001
In 2007	42998	71	0.002
In 2008	41889	41	0.001
In 2009	40960	44	0.001
In 2010	51683	28	0.001
In 2011	51341	44	0.001
In 2012	49411	35	0.001
In 2013	44797	37	0.001
In 2014	42591	27	0.001

Mann-Kendall Analysis --

Table 11.218. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Increasing	15
In 2010	Increasing	13
In 2011	Not Increasing	9
In 2012	Not Increasing	3
In 2013	Not Increasing	3
In 2014	Not Increasing	3

These metrics indicates that this performance measure is decreasing.

- z. For **equipment malfunctions due to failing valves** on the **Network Valves** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.219. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.220. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

aa. For **other threats** on the **Other Outside Force Damage - Crossbores** section, PEOPLES GAS will:

- Performance Measure --

Track the number of Crossbore Inspections completed and Crossbores found per year.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Crossbores Found per Inspection (PMMETRIC)

Your Data --

Table 11.221. End of Year

	Crossbores Found per Inspection
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.030
In 2013	0.010
In 2014	0.010

Mann-Kendall Analysis --

Table 11.222. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0

AG 4.01 Attach 05

In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	7
In 2013	Increasing	13
In 2014	Increasing	19

These metrics indicates that this performance measure is increasing.

ab. For **equipment malfunctions due to failing valves** on the **Gas Operations Distribution Valves** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.223. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	3.000
In 2011	5.000
In 2012	7.000
In 2013	3.000
In 2014	3.000

Mann-Kendall Analysis --

Table 11.224. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	7
In 2011	Increasing	13
In 2012	Increasing	18
In 2013	Increasing	21
In 2014	Increasing	24

These metrics indicates that this performance measure is increasing.

ac. For **equipment malfunctions due to failing valves** on the **Kerotest Valve** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.225. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000

AG 4.01 Attach 05

In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.226. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

ad. For **other threats** on the **Excavation Damage - Critical Facilities** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.227. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.228. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

ae. For **other threats** on the **Incorrect Operations - Non-Approved Material** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Table 11.229. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.230. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

af. For **other threats** on the **Excavation Damage - Inactive Services** section, PEOPLES GAS will:

- Performance Measure --

Record the number of inactive services (over 3 years) that are cut off from their supply of gas and retired.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Inactive Services Retired (PMMETRIC)

Your Data --

Table 11.231. End of Year

	Inactive Services Retired
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.232. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

ag. For **other threats** on the **Meters/Shutoffs Inaccessible** section, PEOPLES GAS will:

- Performance Measure --

Record the number of inside and outside meters.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Percentage of Outside Meters (PMMETRIC)

Your Data --

Table 11.233. End of Year

	Percentage of Outside Meters
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.234. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

ah. For **other threats** on the **Other - Soft Closed Accounts** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.235. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.236. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

ai. For **other threats** on the **Incorrect Operations - Improper Odorization** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.237. End of Year

	Frequency of Failures
In 2005	0.000
In 2006	0.000
In 2007	0.000
In 2008	0.000
In 2009	0.000
In 2010	0.000
In 2011	0.000
In 2012	0.000
In 2013	0.000
In 2014	0.000

Mann-Kendall Analysis --

Table 11.238. End of Year

	MK Analysis Result	MK Metrics (S-Values)
In 2009	Not Increasing	0
In 2010	Not Increasing	0
In 2011	Not Increasing	0
In 2012	Not Increasing	0
In 2013	Not Increasing	0
In 2014	Not Increasing	0

These metrics indicates that this performance measure is not changing in a statistically significant way.

aj. For **other threats** on the **Corrosion - Cased Pipelines** section, PEOPLES GAS will:

- Performance Measure --

track the frequency of these failures.

Data for this performance measure are NOT entered into SHRIMP in the threat assessment interviews.

No Data Found.

- Tracking Frequency of Failures (PMMETRIC)

Your Data --

Table 11.239. End of Year